Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Previously presented) A process for preparing adenovirus, the process comprising:
   (a) preparing a culture of producer cells in a selected media;
   (b) infecting producer cells in the culture with the adenovirus, wherein the producer cells are infected between mid-log phase of growth and stationary phase of growth; and
   (c) harvesting adenovirus from the cell culture.

2. (Previously presented) The process of claim 30, wherein the producer cells are infected with the adenovirus between late-log phase and stationary phase of growth.

3. (Previously presented) The process of claim 1, wherein the producer cells are essentially homogeneous with respect to the phase of cell growth.

4. (Original) The process of claim 1, wherein the producer cells are perfused for at least a portion of the time that the cells are cultured.

5. (Original) The process of claim 4, wherein the producer cells are perfused at a rate that will maintain a glucose level of between about 0.5 and about 3.0 gm glucose/liter.

6. (Original) The process of claim 5, wherein the producer cells are perfused at a rate that will maintain a glucose level of between about 0.7 and about 2.0 gm glucose/liter.

7. (Original) The process of claim 6, wherein the producer cells are perfused at a rate that maintains a glucose level of between about 1 and about 1.5 gm glucose/liter.

8. (Original) The process of claim 1, wherein the producer cells are seeded into the culture medium and allowed to attach to a culture surface for between about 3 hours and about 24 hours prior to infection with adenovirus.

9. (Original) The process of claim 1, wherein the culture medium is at least partially recirculated during the adenovirus infection step.

10. (Original) The process of claim 1, wherein the culture medium is seeded with between about 0.5 x 10^4 and about 3 x 10^4 cells/cm2.

11. (Original) The process of claim 10, wherein the culture medium is seeded with between about 7.5 x 10^3 and about 2.0 x 10^4 cell/cm2.

12. (Original) The process of claim 11, wherein the culture medium is seeded with between about 9 x 10^3 and 1.5 x 10^4 cells/cm2.

13. (Original) The process of claim 1, wherein the harvested adenovirus is subjected to purification and placed into a pharmaceutically acceptable composition.

14. (Original) The process of claim 13, the adenovirus is purified by steps which include chromatography.

15. (Original) The process of claim 14, wherein the chromatography step involves subjecting the adenovirus to more than one chromatographic separations.

16. (Original) The process of claim 14, wherein the chromatography step involves subjecting the adenovirus to only one chromatographic separation.

17. (Original) The process of claim 16, wherein the chromatographic separation includes ion-exchange chromatography.

18. (Previously presented) The process of claim 1, wherein said adenovirus is a replication-deficient adenovirus encoding a selected gene operably linked to a promoter.

19. (Original) The process of claim 18, wherein said replication deficient adenovirus is lacking at least a portion of the E1 region.

20. (Original) The process of claim 19, wherein said producer cells complement the growth of replication deficient adenovirus.

21. (Original) The process of claim 1, wherein said producer cells are selected from the group consisting of 293, PER.C6, 911 and IT293SF cells.

22. (Original) The process of claim 21, wherein said producer cells are 293 cells.

23. (Original) The process of claim 18, wherein said selected gene is selected from the group consisting of antisense *ras*, antisense *myc,* antisense *raf,* antisense *erb,* antisense *src,* antisense *fms,* antisense *jun,* antisense *trk,* antisense *ret,* antisense *gsp,* antisense *hst,* antisense *bcl* antisense *abl,* Rb, CFTR, p16, p21, p27, p57, p73, C-CAM, APC, CTS-1, zac1, scFV *ras*, DCC, NF-1, NF-2, WT-1, MEN-I, MEN-II, BRCA1, VHL, MMAC1, FCC, MCC, BRCA2, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11 IL-12, GM-CSF G-CSF, mda-7, thymidine kinase or p53.

24. (Original) The process of claim 23, wherein said selected gene is a p53 gene.

25. (Original) The process of claim 18, wherein said promoter is an SV40 IE, RSV LTR, β-actin, CMV-IE, adenovirus major late, polyoma F9-1, or tyrosinase promoter.

26. (Original) The process of claim 1, wherein the adenovirus is harvested by steps that include lysing the producer cells by means other than freeze-thaw.

27. (Original) The process of claim 26, wherein the producer cells are lysed by means of a detergent lysis.

28. (Original) The process of claim 26, wherein the producer cells are lysed by means of autolysis.

29. (Previously presented) The process of claim 1, further comprising purifying the harvested adenovirus to obtain a purified adenovirus composition having one or more of the following properties:

(a) a virus titer of between about 1×10^9 and about 1×10^{13} pfu/ml;

(b) a virus particle concentration between about 1×10^{10} and about 2×10^{13} particles/ml;

(c) a particle:pfu ratio between about 10 and about 60;

(d) having less than 50 ng BSA per 1×10^{e12} viral particles;

(e) between about 50 pg and 1 ng of contaminating human DNA per 1×10^{12} viral particles,

(f) a single HPLC elution peak consisting essentially of 97 to 99% of the area under the peak.

30. (Previously presented) The process of claim 1, wherein infecting producer cells in the culture with the adenovirus occurs in a bioreactor system, a microcarrier culture system, a multiplate culture system, a perfused packed bed reactor system, or a microencapsulation culture system.

31. (Previously presented) The process of claim 29, further comprising formulating the purified adenovirus composition into a pharmaceutically acceptable composition.

32. (cancelled)

33. (Previously presented) The process of claim 31, wherein the pharmaceutically acceptable composition is administered to a subject.

34. (Previously presented) The process of claim 33, wherein the subject is a mammal.

35. (Previously presented) The process of claim 34, wherein the mammal is a human or a mouse.

36. (Previously presented) The process of claim 33, wherein administering is intravenously, intradermally, intramuscularly, intraarterially, intralesionally, percutaneously, subcutaneously, or by inhalation.

37. (Previously presented) The process of claim 36, wherein administering is intratumorally.

38. (Previously presented) The process of claim 1, wherein the adenovirus is a recombinant adenovirus.

39. (Previously presented) The process of claim 1, wherein the producer cells are cultured in a bioreactor system.

40. (Previously presented) The process of claim 39, wherein the bioreactor system is a stirred tank reactor.

41. (Previously presented) The process of claim 39, wherein the bioreactor system is a airlift reactor.

42. (Previously presented) The process of claim 39, wherein the bioreactor system is a sparged bioreactor.

43. (Previously presented) The process of claim 1, wherein the producer cells are cultured in a microcarrier culture system.

44. (Previously presented) The process of claim 1, wherein the producer cells are cultured in a multiplate cell culture system.

45. (Previously presented) The process of claim 1, wherein the producer cells are cultured in a perfused packed bed reactor system.

46. (Previously presented) The process of claim 1, wherein the producer cells are cultured in a microencapsulation culture system.

47. (Previously presented) In a method for producing adenovirus that includes culturing producer cells and infecting the cultured producer cells with an adenovirus, wherein the improvement comprises infecting said producer cells with the adenovirus when the cells in culture are between mid-log phase of growth and stationary phase of growth.

48. (currently amended) A method of claim 47, wherein the <u>further</u> improvement comprises infecting the cultured producer cells in a bioreactor system, a microcarrier culture system, a multiplate culture system, a perfused packed bed reactor system, or a microencapsulation culture system.

49. (Previously presented) A method of claim 47, wherein the improvement further comprises harvesting adenovirus from the cell culture.

50. (Previously presented) A method of claim 47, wherein the improvement further comprises infecting producer cells in a culture with adenovirus between late-log phase of growth and stationary phase of growth.

51. (Previously presented) A method of claim 47, wherein said adenovirus is a recombinant adenovirus.

52. (Previously presented) A method of claim 51, wherein said recombinant adenovirus comprises a selected gene operably linked to a promoter.

53. (Previously presented) A method of claim 47, wherein said adenovirus is a replication-deficient adenovirus.

54. (Previously presented) A method of claim 53, wherein said replication deficient adenovirus is lacking at least a portion of the E1 region.

55. (Previously presented) A method of claim 47, wherein said producer cells complement the growth of replication deficient adenovirus.

56. (Previously presented) A method of claim 55, wherein said producer cells are selected from the group consisting of 293, PER.C6, 911 and IT293SF cells.

57. (Previously presented) A method of claim 56, wherein said producer cells are 293 cells.

58. (Previously presented) A method of claim 47, wherein the producer cells are essentially homogeneous with respect to the phase of cell growth.

59. (Previously presented) A method of claim 52, wherein said selected gene is selected from the group consisting of antisense *ras*, antisense *myc,* antisense *raf,* antisense *erb,* antisense *src,* antisense *fms,* antisense *jun,* antisense *trk,* antisense *ret,* antisense *gsp,* antisense *hst,* antisense *bcl* antisense *abl,* Rb, CFTR, p16, p21, p27, p57, p73, C-CAM, APC, CTS-1, zac1, scFV *ras*, DCC, NF-1, NF-2, WT-1, MEN-I, MEN-II, BRCA1, VHL, MMAC1, FCC, MCC, BRCA2, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11 IL-12, GM-CSF G-CSF, mda-7, thymidine kinase or p53.

60. (Previously presented) A method of claim 59, wherein said selected gene is a p53 gene.

61. (Previously presented) A method of claim 52, wherein said promoter is an SV40 IE, RSV LTR, β-actin, CMV-IE, adenovirus major late, polyoma F9-1, or tyrosinase promoter.

62. (Previously presented) A method of claim 49, wherein the improvement further comprises purifying the harvested adenovirus to obtain a purified adenovirus composition having one or more of the following properties:

(a) a virus titer of between about 1×10^9 and about 1×10^{13} pfu/ml;

(b) a virus particle concentration between about 1×10^{10} and about 2×10^{13} particles/ml;

(c) a particle:pfu ratio between about 10 and about 60;

(d) having less than 50 ng BSA per 1×10^{e12} viral particles;

(e) between about 50 pg and 1 ng of contaminating human DNA per 1×10^{12} viral particles,

(f) a single HPLC elution peak consisting essentially of 97 to 99% of the area under the peak.